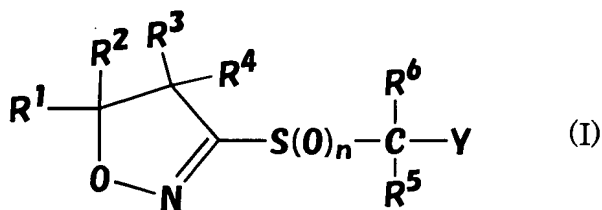


CLAIMS:

1. A herbicidal composition which comprises i) an isoxazoline derivative represented by the following general formula (I) or its salt and ii) at least one  
 5 compound selected from the following Group A:

i) Formula (I)



wherein  $R^1$  and  $R^2$  are respectively independently a  
 10 hydrogen atom, a C1 to C10 alkyl group, a C3 to C8 cycloalkyl group or a C3 to C8 cycloalkyl C1 to C3 alkyl group; or  $R^1$  and  $R^2$  may be bonded to each other to form a C3 to C7 spiro ring together with the carbon atoms to which they bond;

15  $R^3$  and  $R^4$  are respectively independently a hydrogen atom, a C1 to C10 alkyl group or a C3 to C8 cycloalkyl group; or  $R^3$  and  $R^4$  may be bonded to each other to form a C3 to C7 spiro ring together with the carbon atoms to which they bond; or  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  may form a 5- to 8-  
 20 membered ring together with the carbon atoms to which they bond;

$R^5$  and  $R^6$  are respectively independently a hydrogen atom or a C1 to C10 alkyl group;

Y is a 5- to 6-membered aromatic heterocyclic group

or condensed aromatic heterocyclic group having one or more hetero atoms selected from a nitrogen atom, an oxygen atom and a sulfur atom; the heterocyclic group may be substituted with 0 to 6 same or different groups  
 5 selected from the following substituent group  $\alpha$ ; when the heterocyclic group is substituted at the two adjacent positions with two alkyl groups, two alkoxy groups, an alkyl group and an alkoxy group, an alkyl group and an alkylthio group, an alkyl group and an alkylsulfonyl  
 10 group, an alkyl group and a monoalkylamino group, or an alkyl group and a dialkylamino group, all selected from the substituent group  $\alpha$ , the two groups may form, together with the atoms to which they bond, a 5- to 8-membered ring which may be substituted with 1 to 4  
 15 halogen atoms; the hetero atom of the heterocyclic group, when it is a nitrogen atom, may be oxidized to become N-oxide;

n is an integer of 0 to 2;

(Substituent group  $\alpha$ )

20 Hydroxyl group; thiol group; halogen atoms; C1 to C10 alkyl groups; C1 to C10 alkyl groups each mono-substituted with a group selected from the following substituent group  $\beta$ , C1 to C4 haloalkyl groups; C3 to C8 cycloalkyl groups; C1 to C10 alkoxy groups; C1 to C10  
 25 alkoxy groups each mono-substituted with a group selected from the following substituent group  $\gamma$ ; C1 to C4 haloalkoxy groups; C3 to C8 cycloalkyloxy groups; C3 to

C8 cycloalkyl C1 to C3 alkyloxy groups; C1 to C10 alkylthio groups; C1 to C10 alkylthio groups each mono-substituted with a group selected from the substituent group  $\gamma$ ; C1 to C4 haloalkylthio groups; C2 to C6 alkenyl groups; C2 to C6 alkenyloxy groups; C2 to C6 alkynyl groups; C2 to C6 alkynyloxy groups; C1 to C10 alkylsulfinyl groups; C1 to C10 alkylsulfinyl groups each mono-substituted with a group selected from the substituent group  $\gamma$ ; C1 to C10 alkylsulfonyl groups; C1 to C10 alkylsulfonyl groups each mono-substituted with a group selected from the substituent group  $\gamma$ ; C1 to C4 haloalkylsulfinyl groups; C1 to C10 alkylsulfonyloxy groups each mono-substituted with a group selected from the substituent group  $\gamma$ ; C1 to C4 haloalkylsulfonyl groups; C1 to C10 alkylsulfonyloxy groups; C1 to C4 haloalkylsulfonyloxy groups; optionally substituted phenyl group; optionally substituted phenoxy group; optionally substituted phenylthio group; optionally substituted aromatic heterocyclic groups; optionally substituted aromatic heterocyclic oxy groups; optionally substituted aromatic heterocyclic thio groups; optionally substituted phenylsulfinyl groups; optionally substituted phenylsulfonyl groups; optionally substituted aromatic heterocyclic sulfonyl groups; optionally substituted phenylsulfonyloxy groups; acyl groups; C1 to C4 haloalkylcarbonyl groups; optionally substituted benzylcarbonyl group; optionally substituted benzoyl

group; carboxyl group; C1 to C10 alkoxycarbonyl groups; optionally substituted benzyloxycarbonyl group; optionally substituted phenoxycarbonyl group; cyano group; carbamoyl group (its nitrogen atom may be substituted with same or different groups selected from C1 to C10 alkyl groups and optionally substituted phenyl group); C1 to C6 acyloxy groups; C1 to C4 haloalkylcarbonyloxy groups; optionally substituted benzylcarbonyloxy group; optionally substituted benzoyloxy group; nitro group; and amino group (its nitrogen atom may be substituted with same or different groups selected from C1 to C10 alkyl groups, optionally substituted phenyl group, C1 to C6 acyl groups, C1 to C4 haloalkylcarbonyl groups, optionally substituted benzylcarbonyl group, optionally substituted benzoyl group, C1 to C10 alkylsulfonyl group, C1 to C4 haloalkylsulfonyl groups, optionally substituted benzylsulfonyl group, and optionally substituted phenylsulfonyl group);

(Substituent group  $\beta$ )

Hydroxyl group; C3 to C8 cycloalkyl groups (which may be substituted with halogen atom or alkyl group); C1 to C10 alkoxy groups; C1 to C10 alkylthio groups; C1 to C10 alkylsulfonyl groups; C1 to C10 alkoxycarbonyl groups; C2 to C6 haloalkenyl groups; amino group (its nitrogen atom may be substituted with same or different groups selected from C1 to C10 alkyl groups, C1 to C6

acyl groups; C1 to C4 haloalkylcarbonyl groups, C1 to C10 alkylsulfonyl groups and C1 to C4 haloalkylsulfonyl groups); carbamoyl group (its nitrogen atom may be substituted with same or different C1 to C10 alkyl groups); C1 to C6 acyl groups; C1 to C4 haloalkylcarbonyl groups; C1 to C10 alkoxyimino groups; cyano group; optionally substituted phenyl group; and optionally substituted phenoxy group;

(Substituent group  $\gamma$ )

C1 to C10 alkoxycarbonyl groups; optionally substituted phenyl group; optionally substituted aromatic heterocyclic groups; cyano group; and carbamoyl group (its nitrogen atom may be substituted with same or different C1 to C10 alkyl groups); and

ii) Group A

atrazine, simazine, cyanazine, isoxaflutole, mesotrione, flumetsulam, imazethapyr, imazapyr, dicamba, clopyralid, prosulfuron, halosulfuron-methyl, rimsulfuron, bentazone, carfentrazone-ethyl, metribuzin, thifensulfuron-methyl, nicosulfuron, primisulfuron, cloransulam-methyl, glufosinate, glyphosate, glyphosate-trimesium, pendimethalin, linuron, prometryn, diflufenican, flumioxazin, and metolachlor.

2. The herbicidal composition according to Claim 1,

wherein the isoxazoline derivative of the formula (I) or its salt has a substituent selected from the substituent group  $\alpha$  on the heterocycle which may be substituted with

0 to 6 same or different groups, including hydroxyl  
 group; halogen atoms; C1 to C10 alkyl groups; C1 to C10  
 alkyl groups each mono-substituted with a group selected  
 from the substituent group  $\beta$ , C1 to C4 haloalkyl groups;  
 5 C3 to C8 cycloalkyl groups; C1 to C10 alkoxy groups; C1  
 to C10 alkoxy groups each mono-substituted with a group  
 selected from the substituent group  $\gamma$ ; C1 to C4  
 haloalkoxy groups; C3 to C8 cycloalkyloxy groups; C3 to  
 C8 cycloalkyl C1 to C3 alkyloxy groups; C1 to C10  
 10 alkylthio groups; C1 to C10 alkylthio groups each mono-  
 substituted with a group selected from the substituent  
 group  $\gamma$ ; C1 to C4 haloalkylthio groups; C2 to C6 alkenyl  
 groups; C2 to C6 alkenyloxy groups; C2 to C6 alkynyl  
 groups; C2 to C6 alkynyloxy groups; C1 to C10  
 15 alkylsulfonyl groups; C1 to C4 haloalkylsulfonyl groups;  
 optionally substituted phenyl group; optionally  
 substituted phenoxy group; optionally substituted  
 phenylthio group; optionally substituted aromatic  
 heterocyclic groups; optionally substituted aromatic  
 20 heterocyclic oxy groups; optionally substituted aromatic  
 heterocyclic thio groups; optionally substituted  
 phenylsulfonyl groups; optionally substituted aromatic  
 heterocyclic sulfonyl groups; C1 to C6 acyl groups; C1 to  
 C4 haloalkylcarbonyl groups; optionally substituted  
 25 benzylcarbonyl group; optionally substituted benzoyl  
 group; carboxyl group; C1 to C10 alkoxycarbonyl groups;  
 cyano group; carbamoyl group (its nitrogen atom may be

substituted with same or different groups selected from C1 to C10 alkyl groups and optionally substituted phenyl group); nitro group; and amino group (its nitrogen atom may be substituted with same or different groups selected from C1 to C10 alkyl groups, optionally substituted phenyl group, C1 to C6 acyl groups, C1 to C4 haloalkylcarbonyl groups, optionally substituted benzylcarbonyl group, optionally substituted benzoyl group, C1 to C10 alkylsulfonyl groups, C1 to C4 haloalkylsulfonyl groups, optionally substituted benzylsulfonyl group, and optionally substituted phenylsulfonyl group); when the heterocyclic group is substituted at the two adjacent positions with two alkyl groups, two alkoxy groups, an alkyl group and an alkoxy group, an alkyl group and an alkylthio group, an alkyl group and an alkylsulfonyl group, an alkyl group and a monoalkylamino group, or an alkyl group and a dialkylamino group, the two groups may form, together with the atoms to which they bond, a 5- to 8-membered ring which may be substituted with 1 to 4 halogen atoms.

3. The herbicidal composition according to Claim 2, wherein the isoxazoline derivative of the formula (I) or its salt has a substituent selected from the substituent group  $\alpha$  on the heterocycle which may be substituted with 0 to 6 same or different groups, including halogen atoms; C1 to C10 alkyl groups; C1 to C4 haloalkyl groups; C1 to C10 alkoxy C1 to C3 alkyl groups; C3 to C8 cycloalkyl

groups (which may be substituted with halogen atom or alkyl group); C1 to C10 alkoxy groups; C1 to C4 haloalkoxy groups; C3 to C8 cycloalkyl C1 to C3 alkyloxy groups; optionally substituted phenoxy group; C1 to C10 alkylthio groups; C1 to C10 alkylsulfonyl groups; acyl groups; C1 to C4 haloalkylcarbonyl groups; C1 to C10 alkoxy carbonyl groups; cyano group and carbamoyl group (its nitrogen atom may be substituted with same or different C1 to C10 alkyl groups).

10 4. The herbicidal composition according to any of Claim 1, 2 or 3, wherein  $R^1$  and  $R^2$  may be the same or different and are each a methyl group or an ethyl group; and  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are each a hydrogen atom.

5. The herbicidal composition according to any of Claim 15 1, 2, 3 or 4, wherein Y is a 5- or 6-membered aromatic heterocyclic group having a hetero atom selected from a nitrogen atom, an oxygen atom and a sulfur atom.

6. The herbicidal composition according to Claim 5, wherein Y is a thienyl group, a pyrazolyl group, an isoxazolyl group, an isothiazolyl group, a pyridyl group or a pyrimidinyl group.

7. The herbicidal composition according to Claim 6, wherein Y is a thiophen-3-yl group, a pyrazol-4-yl group, a pyrazol-5-yl group, an isoxazol-4-yl group, an isothiazol-4-yl group, a pyridyn-3-yl group or a pyrimidin-5-yl group.

8. The herbicidal composition according to Claim 7,



wherein Y is a thiophen-3-yl group and the thiophene ring is substituted with the substituent group  $\alpha$  at the 2- and 4-positions.

9. The herbicidal composition according to Claim 7,  
5 wherein Y is a pyrazol-4-yl group and the pyrazole ring is substituted at the 3- and 5-positions with the substituent group  $\alpha$  and at the 1-position with a hydrogen atom, a C1 to C10 alkyl group, a C1 to C10 alkyl group mono-substituted with a group selected from the  
10 substituent group  $\beta$ , a C1 to C4 haloalkyl group, a C3 to C8 cycloalkyl group, a C2 to C6 alkenyl group, a C2 to C6 alkynyl group, a C1 to C10 alkylsulfinyl group, a C1 to C10 alkylsulfonyl group, a C1 to C10 alkylsulfonyl group mono-substituted with a group selected from the  
15 substituent group  $\gamma$ , a C1 to C4 haloalkylsulfonyl group, an optionally substituted phenyl group, an optionally substituted aromatic heterocyclic group, an optionally substituted phenylsulfonyl group, an optionally substituted aromatic heterocyclic sulfonyl group, an acyl  
20 group, a C1 to C4 haloalkylcarbonyl group, an optionally substituted benzylcarbonyl group, an optionally substituted benzoyl group, a C1 to C10 alkoxy carbonyl group, an optionally substituted benzyloxy carbonyl group, an optionally substituted phenoxy carbonyl group, a  
25 carbamoyl group (its nitrogen atom may be substituted with same or different groups selected from C1 to C10 alkyl groups and optionally substituted phenyl group), or

an amino group (its nitrogen atom may be substituted with same or different groups selected from C1 to C10 alkyl groups, an optionally substituted phenyl group, acyl groups, C1 to C4 haloalkylcarbonyl groups, an optionally substituted benzylcarbonyl group, an optionally substituted benzoyl group, C1 to C10 alkylsulfonyl groups, C1 to C4 haloalkylsulfonyl groups, an optionally substituted benzylsulfonyl group and an optionally substituted phenylsulfonyl group).

10. The herbicidal composition according to Claim 7, wherein Y is a pyrazol-5-yl group and the pyrazole ring is substituted at the 4-position with the substituent group  $\alpha$  and at the 1-position with a hydrogen atom, a C1 to C10 alkyl group, a C1 to C10 alkyl group mono-substituted with a group selected from the substituent group  $\beta$ , a C1 to C4 haloalkyl group, a C3 to C8 cycloalkyl group, a C2 to C6 alkenyl group, a C2 to C6 alkynyl group, a C1 to C10 alkylsulfinyl group, a C1 to C10 alkylsulfonyl group, a C1 to C10 alkylsulfonyl group mono-substituted with a group selected from the substituent group  $\gamma$ , a C1 to C4 haloalkylsulfonyl group, an optionally substituted phenyl group, an optionally substituted aromatic heterocyclic group, an optionally substituted phenylsulfonyl group, an optionally substituted aromatic heterocyclic sulfonyl group, an acyl group, a C1 to C4 haloalkylcarbonyl group, an optionally substituted benzylcarbonyl group, an optionally

substituted benzoyl group, a C1 to C10 alkoxy carbonyl group, an optionally substituted benzyloxy carbonyl group, an optionally substituted phenoxy carbonyl group, a carbamoyl group (its nitrogen atom may be substituted with same or different groups selected from C1 to C10 alkyl groups and an optionally substituted phenyl group), or an amino group (its nitrogen atom may be substituted with same or different groups selected from C1 to C10 alkyl groups, an optionally substituted phenyl group, acyl groups, C1 to C4 haloalkyl carbonyl groups, an optionally substituted benzyl carbonyl group, an optionally substituted benzoyl group, C1 to C10 alkylsulfonyl groups, C1 to C4 haloalkylsulfonyl groups, an optionally substituted benzylsulfonyl group and an optionally substituted phenylsulfonyl group).

11. The herbicidal composition according to Claim 7, wherein Y is an isoxazol-4-yl group and the isoxazole ring is substituted with the substituent group  $\alpha$  at the 3- and 5-positions.

12. The herbicidal composition according to Claim 7, wherein Y is an isothiazol-4-yl group and the isothiazole ring is substituted with the substituent group  $\alpha$  at the 3- and 5-positions.

13. The herbicidal composition according to Claim 7, wherein Y is a pyridin-3-yl group and the pyridine ring is substituted with the substituent group  $\alpha$  at the 2- and 4-positions.

14. The herbicidal composition according to Claim 7, wherein Y is a pyrimidin-5-yl group and the pyrimidine ring is substituted with the substituent group  $\alpha$  at the 4- and 6-positions.

5 15. The herbicidal composition according to any of Claims 1 to 14, wherein n is an integer of 2.

16. The herbicidal composition according to any of Claims 1 to 14, wherein the compound of Group A is at least one compound selected from the group consisting of  
10 atrazine, cyanazine, simazine and prometryn.

17. The herbicidal composition according to any of Claims 1 to 14, wherein the compound of Group A is at least one compound selected from the group consisting of glyphosate, glufosinate, linuron and flumetsulam.

15 18. A herbicidal composition which comprises i) the isoxazoline derivative or its salt is a compound as defined in Claim 9 and ii) the compound of Group A is at least one compound selected from the group consisting of atrazine, cyanazine, simazine, prometryn, glyphosate,  
20 glufosinate, linuron, flumetsulam, metribuzin, isoxaflutole, mesotrione, diflufenican, pendimethalin and flumioxazin.

19. A herbicidal composition which comprises i) the isoxazoline derivative or its salt is a compound as  
25 defined in Claim 9 and ii) the compound of Group A is at least one compound selected from the group consisting of atrazine, cyanazine, simazine and prometryn.

20. A herbicidal composition which comprises i) the isoxazoline derivative or its salt is a compound as defined in Claim 9 and ii) the compound of Group A is at least one compound selected from the group consisting of  
5 glyphosate, glufosinate, linuron and flumetsulam.

21. The herbicidal composition according to any of Claims 1 to 20, wherein ii) at least one compound of Group A is contained in an amount of from 0.001 to 100 parts by weight to 1 part by weight of i) an isoxazoline  
10 derivative represented by the Formula (I) or its salt.

22. The herbicidal composition according to any of Claims 1 to 21, which is used as an agrochemical product containing i) an isoxazoline derivative of the Formula (I) or its salt and ii) at least one compound of Group A  
15 in a total amount of from 0.5 to 90 wt%.